



Dietitian Staffing on Neonatal Units

Neonatal Sub-Group Recommendations for Commissioning

Foreword

The last 20 years have seen a huge number of research studies on the nutritional needs and methods of feeding critically ill infants. The importance of avoiding nutritional deficits by early effective feeding using parenteral nutrition and mothers own milk cannot be underestimated. During prolonged periods of critical care, optimised nutrition is the key to recovery and long term outcomes for all organ systems. Neonatal doctors and nurses cannot be expert in every area of care. Nutrition is one area where the nutrition team needs to be supported by expert dietitians as a critical member of the team. The BDA has been very supportive of the development of specialist dietetic practice and this excellent document reflects this. All neonatal services should ensure that they support and provide such a service.

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Introduction – Allied Health Professionals (AHP) in neonatal care

Around 1 in 7 babies born in the UK are born early, very small or have a medical condition that requires admission to the Neonatal Unit (1). Although advances in neonatal care have improved the survival of premature infants born at lower gestations, infants born prematurely are at risk of neurological, gastrointestinal, respiratory and cardiac problems during their neonatal course. They are also at risk of long term neurodevelopmental problems which have significant implications for the wider health economy.

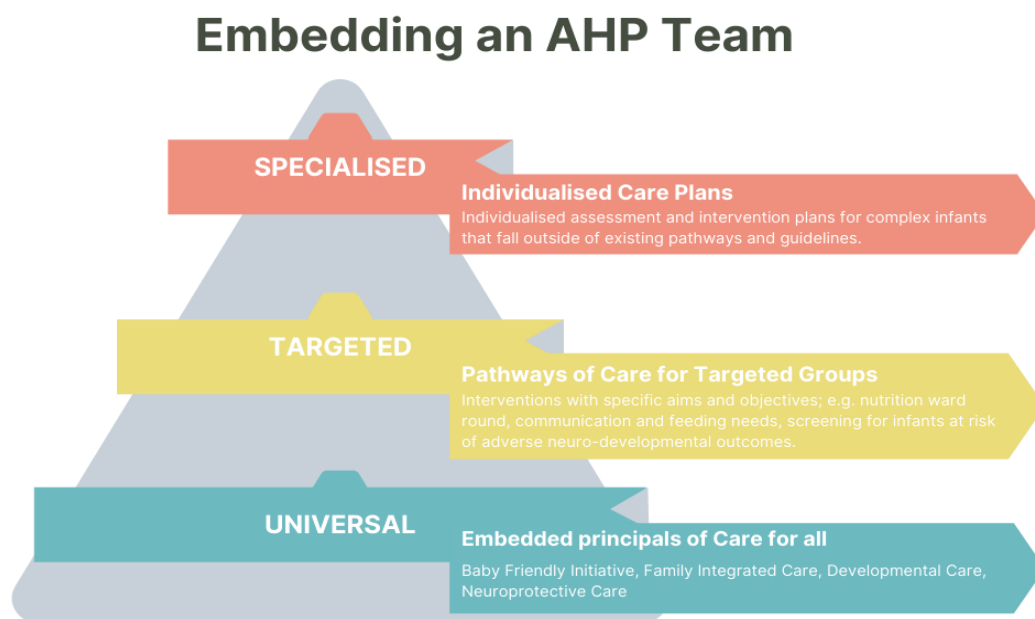


Diagram 1

AHPs play an essential role in the neonatal multidisciplinary team (MDT), providing advanced, discipline specific knowledge and skills in order to optimise care and outcomes for babies and their families (diagram 1). Timely and early intervention by AHPs in this complex and vulnerable population can impact on length of stay, reduces costs, improve family experiences, help to identify neonates at risk and impact longer term neurodevelopmental and other health outcomes.

AHPs have a range of common core skills and professional overlap. Alongside unique clinical skills that enable the provision of targeted pathways of care and specialised individualised care plans, they have the skill set to lead and support universal quality improvement projects such as UNICEF Baby Friendly Initiative (BFI) neonatal standards, Bliss Baby Charter and FICare as integral members of the multi-disciplinary team.

The NHS Long Term Plan (2), the Neonatal Critical Care Review (3) and the Getting it Right First Time report (4) recommend that a multidisciplinary team of Neonatal AHPs be established on the neonatal unit. This team would consist of speech & language therapy, occupational therapy, physiotherapy and dietetics, in addition to psychology and pharmacy.

Each speciality has developed specific staffing recommendations which provide a model for **embedded** AHP service provision as part of the wider MDT. All neonatal AHPs have developed specific competencies and/or postgraduate training and education frameworks in order to ensure the workforce has the relevant expertise and knowledge.

The Dietitian in neonatal care

As survival rates for preterm infants improve, more emphasis is being put on enhancing the quality of outcomes by concentrating on the optimisation of nutritional management. Preterm infants are born at a time of massive nutrient accretion and are consequently delivered with low nutrient reserves. Their resultant high nutritional requirements are difficult to achieve in the neonatal unit environment due in part to the infant's immaturity and reduced capacity to handle nutrition.

Neonatal Dietitians are skilled at assessing, diagnosing and managing the nutritional needs of neonates. They understand and interpret current clinical evidence and guidelines for neonatal parenteral and enteral feeding and are able to apply strategies to both individualised and standardised practice in order to meet the complex nutritional needs of preterm infants.

As a member of the neonatal team a dietitian can have a significant impact on the care of sick and premature infants, providing consistent nutritional care to each infant and designing specialised nutrition practice protocols and monitoring tools. By enhancing clinical effectiveness and avoiding clinical complications the dietetic role can lead to a reduced length of hospital stay with associated cost saving implications (5). Improving the nutritional intake of preterm infants and the introduction of dietitian led nutrition protocols contributes to the reduction of nutrition related clinical complications such as Necrotising Enterocolitis, Retinopathy Of Prematurity, (7) and Bronchopulmonary Dysplasia, (8) leading to improvements in both short-term outcomes, (9 10 11), long term outcomes (12 13) and quality of care (11). Evidence shows that neonatal units that include a dietitian as part of their multidisciplinary team have more consistent nutrition support and provide a focal point for the tracking and management of an infant's nutritional care. They are also more likely to frequently monitor growth and use early optimum nutrition practices (14).

Dietitians also play a key role in the wider MDT, supporting the team to make clinically effective feeding decisions, particularly in regard to the management of feed choices, feeding methods, the transition from parenteral to enteral feeding and the nutritional management of infants with gastro/surgical conditions. They provide nutrition focused training and support to the wider multidisciplinary team and are integral in embedding UNICEF BFI neonatal standards, FICare and the Bliss Baby Charter. Recommendations published by NICE in 2020 and 2022 state that Dietitians should be core members of the neonatal unit Nutrition Care Team, with responsibility for the provision and management of parenteral nutrition (PN) (15 16).

Staffing recommendations for Neonatal Dietetics

Service standards for neonatal dietetic services are set by the British Dietetic Association Neonatal Dietitians Interest Group (BDA NDiG) and are endorsed by British Association of Perinatal Medicine (BAPM).

Neonatal Unit Dietetic Roles

A number of older and more recent sources have been referenced during the development of these neonatal workforce recommendations. In addition to calculations for direct patient care, the following factors need to be considered when devising whole time equivalent recommendations for neonatal dietitians - case mix, case complexity, bed occupancy and ongoing need for intensive care. Allocated time for education, training, supervision and appraisal must also be included in such a post. (17)

- Mayfield et al: one clinical Dietitian per 30 in-patients in a NICU setting. [1989] (18)
- Groh-Wargo et al: service should depend on the size, activity levels and needs of the unit. In units of 30 or more beds the neonatal dietitian is likely to devote 40 or more hours a week to NICU related activities. [2000] (19)
- Guidelines for the Provision of Intensive Care Services. 0.05 – 0.1wte (minimum AFC band 7) per HDU/ITU bed. [2019] (20)
- BAPM Service and Quality Standards for Provision of Neonatal Care in the UK (2010 / /2017 and draft 2022) (21)

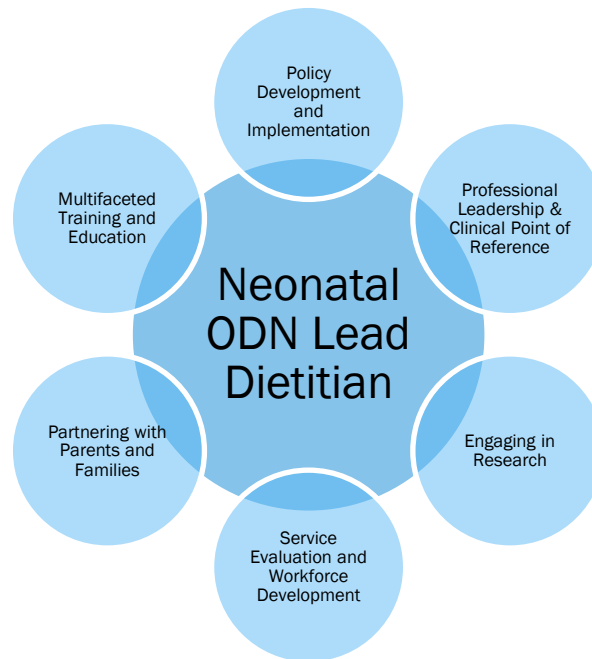
Using the guidelines for intensive care services recommendations as a basis and applying the BAPM nursing factors of 1:1 for each ICC, 1:2 for each HDC and 1:3 for each SCC and TCC, (rather than 1:4 in recognition of the time required for preparation for discharge) a more realistic estimate of dietetic time requirements is shown in the table below:

Level of Care	Factor	Whole Time Equivalents (wte) per cot
Intensive Care Cots (ICC)	1	0.1 [10]
High Dependency Cots (HDC)	1/2	0.05
Special Care Cots (SCC)	1/3	0.033
Transitional Care Cots (TC)	1/3	0.033
Neonatal Outreach/Follow up Services		0.15 additional wte per half day dietetic service required

Neonatal Network Dietetic Roles

Workforce figures should include an **additional** time allocation for a clinical lead/advisor on nutrition for the Network whose role can be represented as a 6 pillared strategic resource (diagram 2). Network Dietitians should ideally be highly experienced neonatal dietitians with experience of leadership, project management and service evaluation. They should be an effective communicator and educator.

Workforce requirement will depend on the size of the Network; however 0.2wte band 8a Specialist Neonatal Dietitian for every 10,000 births would be a justifiable recommendation and would be in line with the recommendations for other Allied Health Professionals within a neonatal network framework.



Competencies and training

The BDA NDIG have published a set of competencies for dietitians to reflect the advanced practice level and specialist nature of working within the neonatal setting (22). The competencies outline the essential knowledge and skills needed by a dietitian in order to work at a safe, effective and professional level within the neonatal environment. It also offers valuable guidance on the training of dietitians in the field of neonatal care.

All dietitians providing neonatal care should be experienced paediatric dietitians who have completed:

- The Health Education England eLearning for Health foundational level training modules, which provide core skills for AHPs and discipline specific dietetics modules including practical skills workbook signed off by line manager.
- And/or the British Dietetic Association Paediatric Dietetic Masters Module 2.
- Demonstrate the required level of knowledge and skills.

Specialist neonatal dietitians must be experienced neonatal dietitians capable of providing support in complex neonatal and surgical dietetics and have:

- Completed the British Dietetic Association Masters Paediatric Dietetic Module 5 (ADV744 Neonatal Nutrition).
- Demonstrate an equivalent level of knowledge and skills.

All paediatric dietitians caring for neonates should have access to a highly skilled specialist neonatal dietitian or network dietitian whose job plan contains sufficient capacity to provide advice and support, either at unit, LMNS or Network level.

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